Summer 2012 Drought Update

According to the U.S. Drought Monitor report released August 2, moderate (D1) to exceptional drought (D4) covers 62.9% of the contiguous U.S. This compares to 63.9% last week. For the history of the U.S Drought Monitor, which began in 1999, this summer's drought is the largest spatial extent of drought. The U.S. Drought Monitor is a collaboration between NOAA, the U.S. Department of Agriculture, and the National Drought Mitigation Center, located at the University of Nebraska-Lincoln, and represents an assessment of drought conditions drawn from hundreds of indicators and peer-reviewed by experts in the field.

According to weekly Palmer Drought severity indices, which is a single index but for which we have a long history, drought conditions covered 59.6% of the U.S. as of July 23. For the Palmer Drought Severity Index, which has data back to 1895, droughts in 1934, 1939, and 1954 had larger spatial drought extents of 79.9%, 62.1%, and 60.4%, respectively.

To view the U.S. Drought Monitor weekly update, visit www.drought.gov

Also, for a visualization depicting weekly drought conditions for the year to date, visit the NOAA Visualization Lab website: http://www.nnvl.noaa.gov/

Comparison to droughts of 1930s and 1950s

In most places in the U.S., drought conditions began this summer, with low rainfall exacerbated by high temperatures. Analyses comparing the current drought with the droughts of the 1930s is ongoing; however, across much of central the U.S., the current drought onset is similar to the drought of summer 1988.

La Niña and El Niño

La Niña is largely responsible for drought conditions in the Southern Plains. In 2011, the worst one-year drought on record in Texas occurred during a La Niña event that began in the previous year and ended by summer. A second La Niña in late 2011 and early 2012 brought lingering drought conditions to the Southern Plains. The return to the current neutral ocean conditions in the equatorial Pacific and the prediction of potential El Niño development later this year, as reported by NOAA's Climate Prediction Center, generally mean we expect above normal precipitation across much of the southern tier of the U.S. Additionally, we expect drier conditions in the Ohio Valley.

Drought Outlook

The NOAA Climate Prediction Center's U.S. Drought Outlook, issued August 2, points to drought conditions lingering or intensifying over most of the U.S. through October 31. Exceptions include the Southwest, Southeast, and Northeast, where limited improvement is suggested.

Drought Impacts

As of July 24, USDA's Economic Research Service showed almost 40% of the country's agricultural land in severe or worse drought, making the 2012 drought more extensive than any since the 1950s. It is affecting 62% of farms, approximately 88% of the corn crop, and 73% of cattle areas. A July 23 USDA report puts 74% of the nation's corn crop in very poor to fair condition, and only 31% of the soybean crop in good or excellent condition. The U.S. Drought Impact Reporter found many accounts in July of drought causing water supply and quality issues for municipal utilities, dying trees, grasshopper and other insect infestations, and curtailed barge traffic on the Ohio and Mississippi rivers.

Droughts and Climate Change

Certain weather and climate extremes, such as more frequent or severe floods and droughts, are predicted to be more likely with climate change. However, the role of climate change in this drought is uncertain. Conditions have been as bad, or worse, than the current drought numerous times in our instrumental record, maintained by NOAA. According to the recent IPCC (2012) report on extreme events and disasters, there is medium confidence that some regions of the world have witnessed more intense and longer droughts, but in some regions including central North America, droughts have become less frequent, less intense, or shorter in duration since about 1950. Conditions over the Great Plains and Midwest have been as bad, or worse, than the current drought numerous times in our instrumental record.

Sources for more information

NIDIS U.S. Drought Portal	http://www.drought.gov
National Drought Mitigation Center	http://drought.unl.edu
NOAA Climate Prediction Center	http://www.cpc.ncep.noaa.gov
NOAA National Climatic Data Center	http://www.ncdc.noaa.gov